

Title (en)
HYDROGEN ENGINE AND THE WAY OF HYDROGEN FUEL PRODUCTION FOR ITS POWER SUPPLY

Title (de)
WASSERSTOFFMOTOR UND VERFAHREN ZUR HERSTELLUNG VON WASSERSTOFFKRAFTSTOFF ZU DESSEN ENERGIEVERSORGUNG

Title (fr)
MOTEUR À HYDROGÈNE ET MOYEN DE PRODUCTION DE CARBURANT HYDROGÈNE POUR SON ALIMENTATION ÉNERGÉTIQUE

Publication
EP 3344851 A1 20180711 (EN)

Application
EP 15784781 A 20150928

Priority
• PL 41373715 A 20150831
• PL 2015000157 W 20150928

Abstract (en)
[origin: WO2017039464A1] The combustion engine is intended to be used in the drive of land vehicles, aerial vehicles and water vehicles, as well as in various kinds of machinery. The engine has the pair of two-chamber cylinders (2), in which double- ended pistons 3 are located and are directed toward themselves oppositely by the angle 180° and compressed together via the crankshafts (4). This shaft consists of two crank elements (4a) and (4b), which are linked together rotationally backward by means of the spacer bearing (5). The compress function of the crankshaft (4) is realized with the use of two connecting rod pairs 7a and 7b, from which each connecting rod is linked on the one side to with one crank element (4a) and (4b), whereas the second connecting rod ends are linked to one of shafts (8), out of which each shaft is connected with one of pistons (3) via valve rod (9). In the middle of each cylinder's wall (2) the outlet channel of compressed air is located (10) as well as the outlet channel of products of combustion together with air (11). In the head (12) of each cylinder (2) and in the compartment (13) the fuel injector (14), the water vapor injector (15) and the ignition element (16) are located. Water vapor injectors (15) are attached to the device for dosing water vapor (21), which is supplied by the water vapor generator (23). The HHO generator is used in order to supply the engine, and as a result obtained oxygen is led through the ionizer (30) to the gas connector (31), where the ionization of oxygen with hydrogen takes place, whereas the formed mixture of gases is transferred to the fuel system of the engine.

IPC 8 full level
F01B 7/16 (2006.01); **F02B 75/28** (2006.01)

CPC (source: EP KR US)
F01B 1/08 (2013.01 - EP KR US); **F01B 7/16** (2013.01 - EP KR US); **F01B 9/02** (2013.01 - EP US); **F01B 9/026** (2013.01 - EP KR US); **F01N 5/025** (2013.01 - EP KR US); **F01N 5/04** (2013.01 - EP KR US); **F02B 25/00** (2013.01 - EP US); **F02B 33/32** (2013.01 - EP US); **F02B 47/02** (2013.01 - EP KR US); **F02B 75/002** (2013.01 - EP KR US); **F02B 75/24** (2013.01 - EP KR US); **F02B 75/282** (2013.01 - EP KR US); **F02B 75/32** (2013.01 - EP KR US); **F02M 25/00** (2013.01 - EP US); **F02M 25/038** (2013.01 - EP US); **F02M 25/12** (2013.01 - KR); **F02B 2043/106** (2013.01 - EP US); **F02B 2075/025** (2013.01 - EP US); **F02M 25/12** (2013.01 - EP US); **Y02E 60/32** (2013.01 - US); **Y02T 10/12** (2013.01 - US); **Y02T 10/30** (2013.01 - EP)

Citation (search report)
See references of WO 2017039464A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2017039464 A1 20170309; WO 2017039464 A8 20180405; CA 2997102 A1 20170309; CA 2997102 C 20230314; CN 108350741 A 20180731; CN 108350741 B 20210309; EP 3344851 A1 20180711; JP 2018529887 A 20181011; JP 6793198 B2 20201202; KR 20180048904 A 20180510; PL 234850 B1 20200430; PL 413737 A1 20170313; US 10605080 B2 20200331; US 2018252105 A1 20180906

DOCDB simple family (application)
PL 2015000157 W 20150928; CA 2997102 A 20150928; CN 201580084128 A 20150928; EP 15784781 A 20150928; JP 2018530476 A 20150928; KR 20187009071 A 20150928; PL 41373715 A 20150831; US 201515756235 A 20150928